

FIG. 1A

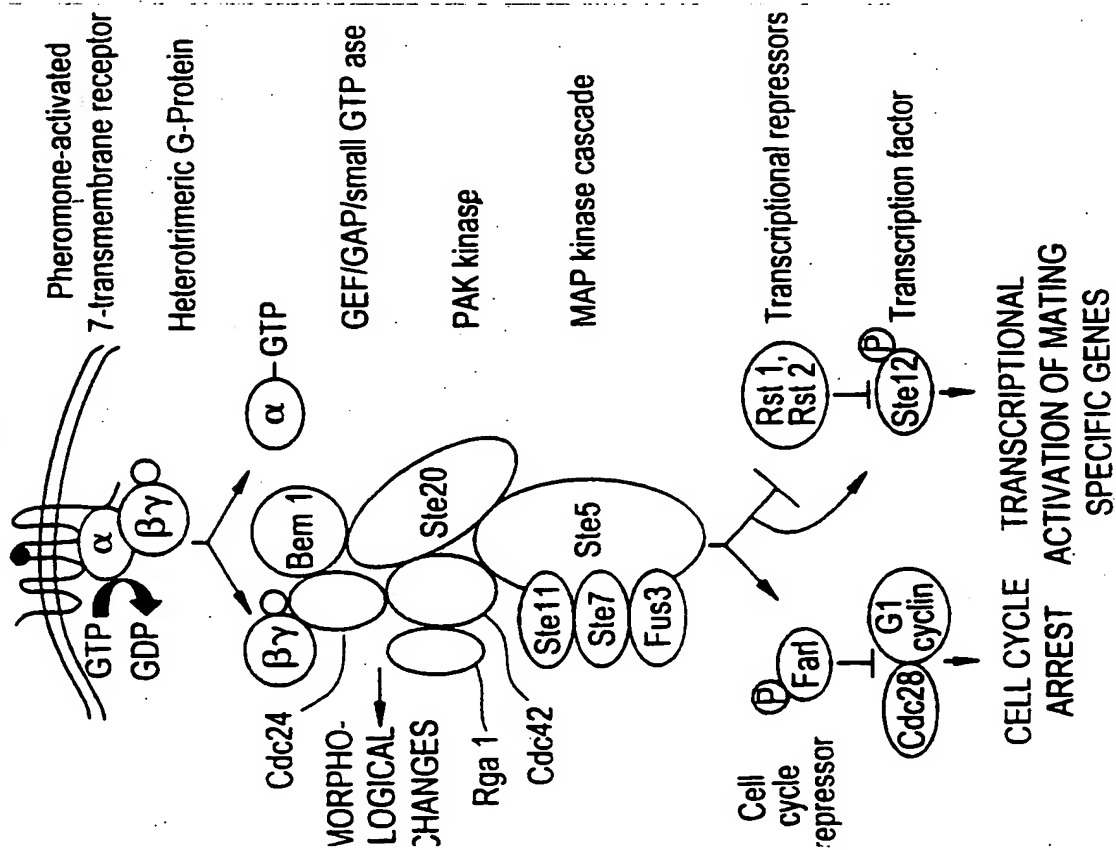


FIG. 1B

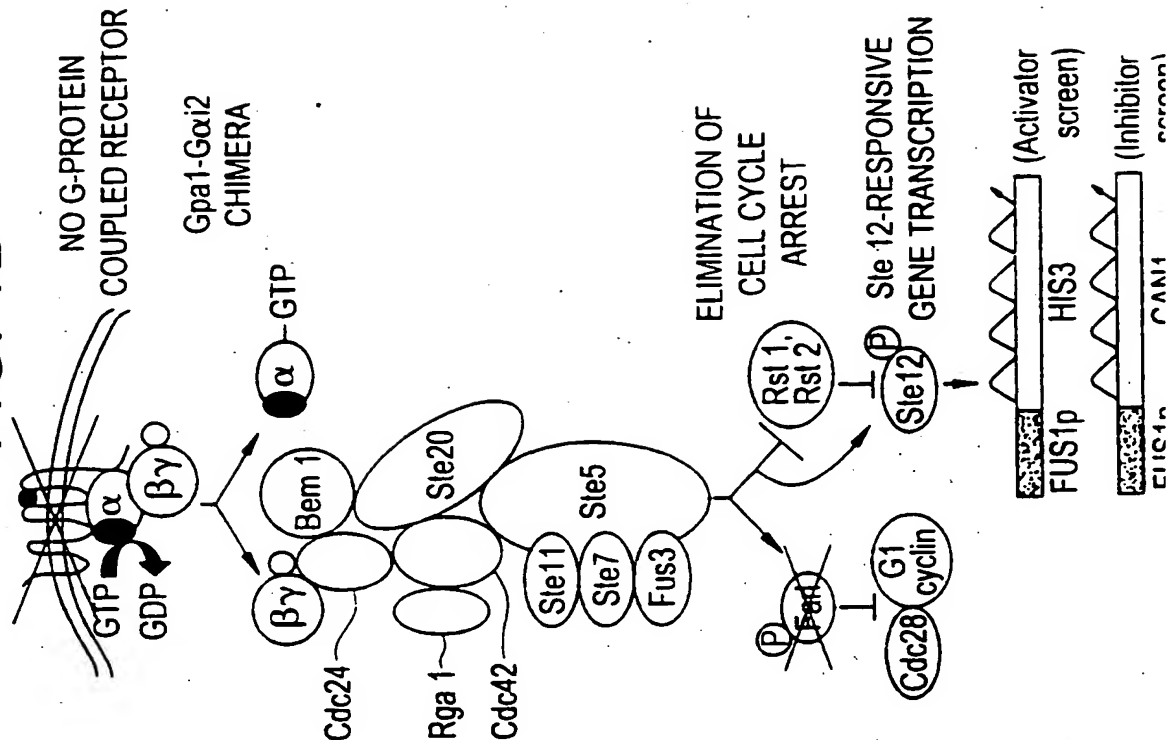


FIG. 2

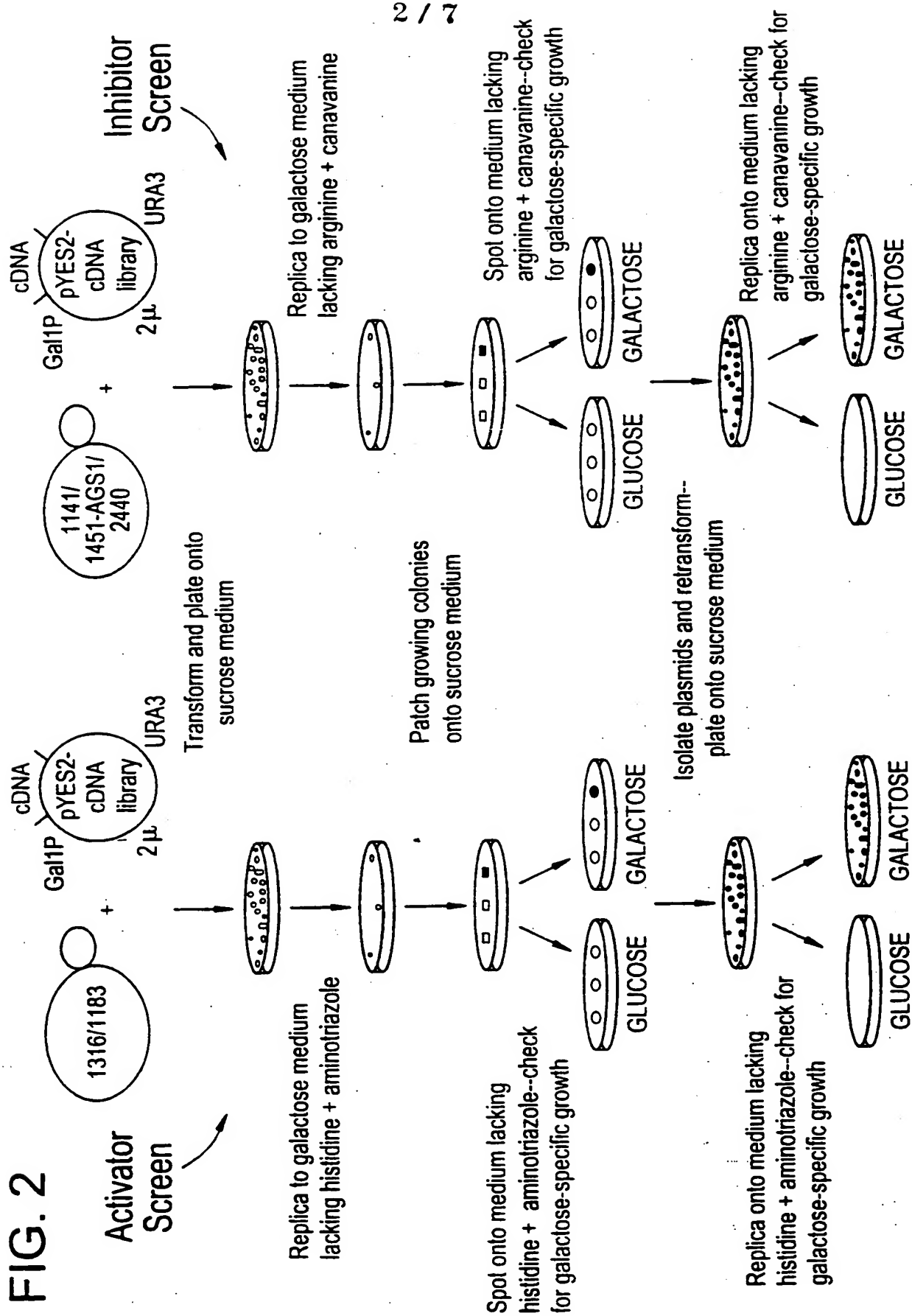


FIG. 3A

10	20	30	40	50	60
ATGAAACTGG	CCGCGATGAT	CAAGAAGATG	TGCCCGAGCG	ACTCGGAGCT	GAGTATCCCG
60					
GCCAAGAAGT	GCTATCGCAT	GGTCATCCTC	GGCTCGTCCA	AGGTGGGCAA	GACGGCCATC
120					
GTGTCCGGCT	TCCTCACCGG	CCGCTTCGAG	GACGCCCTACA	CGCCTACCAT	CGAGGACTTC
180					
CACCGCAAGT	TCTACTCCAT	CCGCGGCGAG	GTCTACCAGC	TCGACATCCT	CGACACGTCC
240					
GGCAACCACC	CGTCCCCCGC	CATCGGCGCG	CTCTCCATCC	TCACAGGAGA	CGTTTTTCATC
300					
310	320	330	340	350	360
CTGGTGTTC	GTCTGGACAA	CCGCGACTCC	TTCGAGGAGG	TGCAGCGGCT	CAGGCAGCAG
360					
ATCCTCGACA	CCAAGTCTTG	CCTCAAGAAC	AAAACCAAGG	AGAACGTGGA	CGTGCCCCCTG
420					
GTCATCTGCG	GCAACAAGGG	TGACCGCGAC	TTCCTACCGCG	AGGTGGACCA	GCGCGAGATC
480					
GAGCAGCTGG	TGGGCGGACGA	CCCCCAGCGC	TGCGCCCTACT	TCGAGATCTC	GGCCAAGAAG
540					
AACAGCAGCC	TGGACCAGAT	GTTCGCGCGG	CTCTTCGCCA	TGGCCAAGCT	GCCCAGCGAG
600					
610	620	630	640	650	660
ATGAGCCCCAG	ACCTGCACCG	CAAGTCTCG	GTGCAGTACT	GCGACGTGCT	GCACAAGAAG
660					
GCGCTGCGGA	ACAAGAAGCT	GCTGCGGGCC	GGCAGCGGCG	GCGGCGGCGG	CGACCCGGGC
720					
GACGCCTTGG	GCATCGTGCC	ACCCCTTCGCG	CGCCGGCCCCA	GCGTACACAG	CGACCTCATG
780					
TACATCCGCG	AGAAGGCCAG	CGCCGGCAGC	CAGGCCAAGG	ACAAGGAGCG	CTGCGTTCATC
840					
AGCTAG	846				

FIG.3B

MKLAAMIKKMCPSDSELSIP	AKNCYRMVILGSSKVGKTAI	40
	*	
VSRFLTGRFEDAYTPTIEDE	HRKFYSIRGEVYQLDILDT	80
	*	
GNHPFPAMRRRLSILTGDFI	LVESLDNRDSFEVQRLRQQ	120
*		
ILDTKSCLKNKTENVDVPL	VICGNKGDREDFYREVDQREI	160
	*	
EQLVGDDPQRCAYFEISAKK	NSSLDQMFRALFAMAKLPSE	200
	*	
MSPDLHRKVSQYCDVLHKK	ALRNKKLLRAGSGGGGGDPG	240
	*	
DAFGIVAPFARRPSVHSDLM	YIREKASAGSQAKDKERCVI	S 281

FIG. 4A

	PM1	G1	PM2
C-HA-RAS1	-----MTEYKLVVVGAGVGKSA	LTQLIQNH	FVDEYDPTIEDS
RALA	-----MAANKPKGQNSLA	LHKVIMV	GSGVGSALTLQFM
RAB-1A	-----MSSMPEYDYL	FKLLIGD	SGVGKCLLR
RHOHP1	-----MTAAQAAGEEAP	PGVRSVK	VLVGDGCGKTS
CDC42	-----MQTIKCVVVG	DGAVGKTC	LLISYTTN
RAC2	-----MQAIKCVVVG	DGAVGKTC	LLISYTTN
ARL1	-----MGFFSSIF	SSLEGTRE	MRILILGLD
RND3/RHOE	-----MDPNQNVK	CKIVVVG	DSQCCKTALL
AGS1	MKLAAMIKMCP	SDSELSIPAK	NCYRMVILGSSK
		VGKTAIVSR	FLTGRFEDAY
			TPTIEDF

	PM3
C-HA-RAS1	YRKQ-VVIDGETCLLD
RALA	ITAGQEEYSAMRDQ
RAB-1A	YMRGTGEGFLCV
RHOHP1	FAINNTKSFEDIHQYRE
CDC42	YRKK-VVLDGEEVQID
RAC2	ILDTAGQEDYAAIR
ARL1	DNYSFRSGEGFLCV
RND3/RHOE	SITEMESEFAATADFE
AGS1	FKIRTIELDGKTIK
	LIQIWDTAGQERF
	TISSYYRGAGHI
	IVVYDVTQESFNNVKQ-WL
	YMN-LQVKGKPVHL
	HIWDTAGQDDYD
	RLRPLFYPDASV
	LLLCFDVTS
	PNFNDINFRWY
	YAVT-VMIGGEPT
	GLGLFDTAGQED
	YDRLRPLSY
	PQTDVFLVCF
	SVSPSSFENVKEKW
	YSAN-VMVDSKPV
	NLGLWDTAGQED
	YDRLRPLSY
	PQTDVFLICF
	SLVSPASIENVR
	AKWFVET----
	VTKNLKFQVWD
	LGQTSIRPYW
	RCYYSNTDA
	VIYVVDSCDR
	RIGISKSELV
	YTAS-FEIDTQRI
	ELSLWDTSGSP
	YDNRPLSY
	PDSDAVLIC
	FDISR
	PETLDSVLK
	KKWKHRKF-YSIRGEV
	YQLDILDTSGN
	HPFPAMRRLS
	ILTGDFILV
	FLVSLDN
	RDSFEVQRLRQ

FIG.4B

G2

C-HA-RAS1	QIKRVKD-----SDDVPMVLVGNKCDLAA-----RTVESRQAQDLARS
RALA	QILRVKE-----DENVPFLLVGNKSDLEDK-----RQVSVEEAKNRAEQ
RAB-1A	QEIDRYA-----SENVNKLVLVGNKCDLTK-----KVVDYTTAKEFADS
RHOHP1	PEVNH-----CKKVPIIVVGCKTDLRKDKSLVNKLRRNGLEPVTYHRGOEMARSV
CDC42	PEITH-----CPKTPFLLVGTQIDLRDDPSTIEKLAKNKQKPIPTETAELARDL
RAC2	PEVRHH-----CPSTPIILVGTKLDLRDDKDTIEKLKEKKLAPITYPQGLALAKEI
ARL1	AMLEEEE-----LRKAILVVFANKQDMEQAMTSSEMANSGLPALKDRK-----
RND3/RHOE	GEIQEF-----CPNTKMLLVGCKSDLRDVTSLVELSNHRQTPVSYDQGANMAKQI
AGS1	QILDTSCLKNKTKENVDPVLVIGCNKGD-RDFY-----REVDPQREIEQLVGD

... : : : *

G3

C-HA-RAS1	YG--IPYIETSAKTRQG-VEDAFYTLVREIR-----
RALA	WN--VNYVETSAKTRAN-VDKVFFDLREIR-----
RAB-1A	LG--IPFLETSAKNATN-VEQSFMTMAAEIK-----
RHOHP1	GA--VAYLECSARLHDN-VHAVFQEAEEVAL-----
CDC42	KA--VKYVECSALTQRG-LKNVFDEAILAAL-----
RAC2	DS--VKYLECSALTQRG-LKTVFDEAIRAVL-----
ARL1	-----WQIFKTSATKGTG-LDEAMEWLVTLSRQ
RND3/RHOE	GA--ATYIECSALQSENSVRDIF-----HVATLAC-----VNKTNNVKNRK
AGS1	DPQRCAYFEISAKKNSS-LDQMFRALEFAMAKLPSEMSPDLHRKVSQYCDVLHKKALRNKK

... : : *

C-HA-RAS1	-----QHLRLKLNPPDESPPGCMSCKCVLS
RALA	-----ARKMEDSKEKNGKKKKRSLAKRIRERCCIL
RAB-1A	-KRMGPGATAGGA-----EKNVKIQSTPVKQAGGGCC
RHOHP1	-----SSRGRNFWRRITQGFVVT
CDC42	-----EPPETQPKRKCCIF
RAC2	-----CPQPTRQQKRACSL
ARL1	
RND3/RHOE	SQRA-----TKRISHMPSRP-----ELSAVATDLRKDKAKSCTVM

FIG.5

	P REGION		G' REGION
RhoE/Rnd3	KIVVVGDSQCGKTALL	.	ISLWDTSGSPYYD
Rnd2	KIVVVGDAECGKTALL	.	LNWDTSGSSYYD
Rnd1	KLVLVGDVQCGKTAML	.	ISLWDTSGSPYYD
RhoA	KLIVVGDGACGKTCLL	.	LALWDTAGQEDYD
RhoB	KLIVVGDGACGKTCLL	.	LALWDTAGQEDYD
Cdc42	KCVVVGDGAVGKTCLL	.	LGLFDTAGQEDYD
Rac1	KCVVVGDGAVGKTCLL	.	LGLWDTAGQEDYD
H-ras	KLIVVVGAGGVGKSALT	.	LDILDITAGQEEYD
AGS	26 RMVILGSSKVGKTAIV	.	LDILDITSGNHFPF 86
			* *